



[6450-01-P]

DEPARTMENT OF ENERGY

Notice of Availability of the Draft Environmental Impact Statement for the W.A. Parish Post-Combustion CO₂ Capture and Sequestration Project, Southeastern TX

AGENCY: U.S. Department of Energy (DOE)

ACTION: Notice of Availability and Public Hearings

SUMMARY: DOE announces the availability of the *Draft Environmental Impact Statement for the W.A. Parish Post-Combustion Carbon Dioxide (CO₂) Capture and Sequestration Project* (DOE/EIS-0473D) for public review and comment, as well as the dates, locations, and times for two public hearings. The draft environmental impact statement (EIS) analyzes the potential environmental impacts of a project proposed by NRG Energy, Inc. (NRG), which was selected by DOE to receive financial assistance under the Clean Coal Power Initiative (CCPI) program. DOE's proposed action is to provide cost-shared funding to NRG under the CCPI. DOE proposes to provide NRG with up to \$167 million of the overall project cost to support the construction and operation of NRG's W.A. Parish Post-Combustion CO₂ Capture and Sequestration Project (Parish PCCS Project). NRG's proposed project would demonstrate the commercial feasibility of a retrofit, commercial-scale CO₂ capture and compression system, coupled with use of the captured CO₂ for enhanced oil recovery (EOR) and ultimate sequestration. NRG would design and construct a system that would capture at least 90 percent of the CO₂ in an up to 250-megawatt equivalent (MWe) flue gas slipstream of the combustion exhaust gases from the existing 650-megawatt (MW) coal fired Unit 8 at NRG's W.A. Parish Plant in Fort Bend County, Texas. The captured CO₂ (up to 5,475 tons per day) would be

transported approximately 80 miles in a new pipeline to be constructed by NRG. The CO₂ would be used for EOR and ultimately sequestered at the existing West Ranch oil field in Jackson County, Texas.

DATES: DOE invites the public to comment on the draft EIS during the public comment period, which ends November 5, 2012. DOE will consider all comments postmarked or received during the comment period in preparing the final EIS and will consider late comments to the extent practicable. In addition to receiving comments in writing and by email [See

ADDRESSES], DOE will conduct two public hearings at which government agencies, private sector organizations, Native American tribes, and individuals are invited to present oral and written comments on the draft EIS. The public hearings will be held at the Thompsons Community Center, 134 Oilfield Road, Thompsons, Texas, on October 10, 2012, and at the Edna High School, 1303 W. Gayle Street, Edna, Texas, on October 11, 2012. Oral comments will be heard during the formal portion of the public hearings beginning at 7 p.m. The public is also invited to informal sessions beginning at 5 p.m. at the same locations to learn more about the project and DOE's proposed action. Representatives from DOE and NRG will be present at the informal sessions to discuss the proposed project, the CCPI program, and the EIS process. Displays and other information about DOE's proposed action and NRG's Parish PCCS Project will also be available.

ADDRESSES: Requests for paper or electronic copies of the draft EIS, requests to speak at the public hearings, or submission of written comments should be directed to: Mr. Mark W. Lusk, National Environmental Policy Act (NEPA) Document Manager, National Energy Technology Laboratory (NETL), 3610 Collins Ferry Road, M/S I07, P.O. Box 880, Morgantown, WV 26507-0880. Requests or comments can also be made by electronic mail to

Parish.EIS0473@netl.doe.gov; by telephone (412) 386-7435, toll free 1-877-812-1569; or by fax (304) 285-4403.

The draft EIS is available on the NETL web page at <http://www.netl.doe.gov/publications/others/nepa/index.html> and on the DOE NEPA web page at <http://energy.gov/nepa/nepa-documents.htm>. Copies of the draft EIS will also be available at the locations listed in the **SUPPLEMENTARY INFORMATION** section of this notice. Written comments on the draft EIS should be marked “Parish PCCS Project” and sent to Mark W. Lusk, NEPA document manager, by one of the methods listed above. Oral comments on the draft EIS can be provided during the public hearings scheduled for the dates and locations provided in the **DATES** section of this notice.

FOR FURTHER INFORMATION: For further information about this project or the draft EIS, please contact Mr. Mark W. Lusk (see **ADDRESSES**). For general information on the DOE NEPA process, please contact Ms. Carol M. Borgstrom, Director, Office of NEPA Policy and Compliance (GC-54), DOE, 1000 Independence Avenue, S.W., Washington, D.C. 20585; telephone (202) 586-4600; fax (202) 586-7031; or leave a toll free message at 1-800-472-2756.

SUPPLEMENTARY INFORMATION: DOE’s proposed action is to provide financial assistance to NRG under the CCPI Program to support construction and operation of NRG’s Parish PCCS Project. DOE would provide NRG with up to \$167 million of the overall project cost, or about 20 percent of the estimated total costs. This funding would be used for project design and development, procurement of capital equipment, construction, CO₂ capture plant operations, and CO₂ monitoring during the 35-month demonstration period of the CO₂ capture and compression system.

The proposed Parish PCCS Project would use an advanced amine-based CO₂ absorption technology to capture at least 90 percent of the CO₂ from an up to 250-MWe portion of the flue gas exhaust from Unit 8 of NRG's existing W.A. Parish Plant in Thompsons, Texas. The project would be designed to capture approximately 1.6 million tons of CO₂ per year from the Unit 8 exhaust that the facility would otherwise emit. The proposed CO₂ capture facility would be constructed within NRG's existing 4,880-acre W.A. Parish Plant in rural Fort Bend County near the small town of Thompsons, Texas. A new natural gas fired cogeneration plant, estimated to be 80 MW in size, would also be constructed on the plant property to produce the auxiliary power and steam needed for operation of the proposed CO₂ capture system.

The captured CO₂ would be compressed and transported via a new, approximately 80-mile long, 12-inch diameter underground pipeline to the existing West Ranch oil field in Jackson County, Texas, where it would be used for EOR and ultimately sequestered in geologic formations from 5,000 to 6,300 feet below ground surface. The proposed CO₂ pipeline route crosses sparsely populated rural and agricultural lands in Fort Bend, Wharton, and Jackson Counties and would be located along or within existing mowed and maintained utility rights-of-way for approximately 85 percent of its length. The West Ranch oil field is located near the town of Vanderbilt, Texas. Existing wells at the West Ranch oil field would be used (i.e., refurbished or deepened, as needed) to the extent practicable for the proposed project. Some new injection wells would be drilled in accordance with underground injection control regulations, and would be installed on existing well pads to the extent practicable.

Consistent with DOE's requirements under CCPI Round 3, NRG identified the following objectives for the Parish PCCS Project:

- Demonstration of advanced amine-based CO₂ absorption technology;

- Integration of a cogeneration plant into the project to meet the specific power and steam requirements of the CO₂ capture system;
- Demonstration of EOR with CO₂ sequestration in a nearby oil field; and
- Demonstration of a CO₂ monitoring program.

DOE prepared this EIS pursuant to the National Environmental Policy Act (NEPA) of 1969 (42 United States Code [USC] 4321 et seq.) and in compliance with the Council on Environmental Quality implementing regulations for NEPA (40 Code of Federal Regulations (CFR) 1500 through 1508) and DOE's NEPA implementing procedures (10 CFR 1021).

Projects considered by DOE for possible CCPI funding originate as a private party's (e.g., electric power industry) application submitted to DOE in response to requirements specified in CCPI funding opportunity announcements. DOE's decision is to either accept or reject the project as proposed, including the proposed technology and the selected sites. However, DOE may require mitigation measures to reduce a project's potential impacts. Consequently, DOE's consideration of reasonable alternatives is limited to the technically acceptable application and the no action-alternative for each selected project.

Under the no-action alternative, DOE would not provide cost-shared funding for the proposed Parish PCCS Project. In the absence of DOE cost-shared funding, NRG could still elect to construct and operate the proposed project. Therefore, the DOE no-action alternative could result in one of two scenarios:

- The proposed Parish PCCS Project would not be built, or
- The proposed Parish PCCS Project would be built by NRG without benefit of DOE cost-shared funding.

DOE assumes that if NRG proceeded with project development in the absence of DOE cost-shared funding, the project would include the features, attributes, and impacts as described for the proposed project. However, without DOE participation, it is possible that the project would be canceled. Therefore, for the purposes of analysis in the draft EIS, the DOE no-action alternative is defined as the no-build alternative. This means that the project would not be built and environmental conditions would not change from the current baseline (i.e., no new construction, resource use, or CO₂ capture and storage would occur). Therefore, under the no-action alternative, the project technologies (i.e., large-scale CO₂ capture and geologic storage) may not be implemented in the near term. Consequently, timely commercialization of these technologies for large-scale, coal-fired electric generation facilities would be postponed and may not be realized. This scenario would not contribute to the CCPI goals to invest in the demonstration of advanced coal-based power generation technologies that capture the CO₂ emissions and either sequester them or put them to beneficial use.

The draft EIS analyzes the environmental consequences that may result from the proposed action and the no action alternative. Potential impacts identified during the scoping process and analyzed in the draft EIS relate to the following: air quality and climate; greenhouse gases; geology; physiography and soils; groundwater; surface water; wetlands and floodplains; biological resources; cultural resources; land use and aesthetics; traffic and transportation; noise; materials and waste management; human health and safety; utilities; community services; socioeconomics; and environmental justice. DOE also intends to use the NEPA process and the analyses completed for the draft EIS to satisfy the requirements of Section 106 of the National Historic Preservation Act and DOE regulations regarding impacts to floodplains and wetlands.

DOE distributed copies of the draft EIS to Members of Congress; Native American tribal governments; federal, state, and local officials; and agencies, organizations, and individuals who may be interested or affected. Copies of the draft EIS are available for review at the George Memorial Library, 1001 Golfview Drive, Richmond, TX 77469; the Albert George Branch Library, 9230 Gene Street, Needville, TX 77461; the Wharton County Library, 1920 North Fulton Street, Wharton, TX 77488; and the Jackson County Memorial Library, 411 North Wells Street, Room 121, Edna, TX 77957. The draft EIS will also be available on the Internet at <http://www.netl.doe.gov/publications/others/nepa/index.html> or <http://energy.gov/nepa/nepa-documents>.

Issued in Washington, DC on September 14, 2012

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